



Docket No. 20029048-1
(F&L Docket No. 084061/0371)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant: Terry M. MARTIN et al.

Title: METHOD, SYSTEM, AND SOFTWARE FOR MAPPING AND
DISPLAYING PROCESS OBJECTS AT DIFFERENT LEVELS
OF ABSTRACTION

Appl. No.: 10/724,728

Filing Date: 12/2/2003

Examiner: Nguyen, Phillip H.

Art Unit: 2191

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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Commissioner for Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Sir:

The following is the Appellant's Appeal Brief under the provisions of 37 C.F.R. 41.37.

1. Real Party in Interest

The real party in interest is Hewlett-Packard Development Company, L.P., which is the assignee of record.

2. Evidence Appendix

There are no related evidence that will directly affect, be directly affected by or have a bearing on the present appeal, that are known to appellant, the assignee, or the appellant's patent representative. The Evidence Appendix (Section 10), attached hereto, states "None".

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3. Related Appeals and Interferences

There are no related appeals or interferences that will directly affect, be directly affected by or have a bearing on the present appeal, that are known to appellant, the assignee, or the appellant's patent representative. The Related Proceedings Appendix (Section 11), attached hereto, states "None".

4. Status of Claims

The present appeal is directed to claims 1-11, 13-22 and 24. A copy of the presently pending claims under rejection are attached herein in the Claims Appendix (Section 12). Claims 1-11, 13-22 and 24 were finally rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,151,438 to Hall et al. Claims 13-24 were also rejected under 35 U.S.C. § 101, whereby the amendments made by way of the "now entered" after-final response filed on July 24, 2007 are believed to have overcome the 35 U.S.C. § 101 rejection.

5. Status of Amendments

No amendments are being filed concurrently with this Appeal Brief. Based on a telephone call between Appellant's representative and Examiner Nguyen on September 6, 2007, whereby Appellant's representative indicated that the Advisory Action dated July 24, 2007 did not indicate whether the after-final response filed on July 10, 2007 would be entered for purposes of appeal, Examiner Nguyen stated that the after-final response filed on July 10, 2007 would be entered for purposes of appeal. The Claims Appendix to this Appeal Brief reflects the claims based on entry of the after-final response.

6. Summary of the Invention

The present invention is directed to a method and storage device for mapping and displaying process objects at different levels of abstraction. As explained on page 1 of the specification, when developing or customizing a software system that provides business functionality for users, one problem exists with respect to providing coordination between business analysts and software system analysts. By providing a mapping of business level objects and application level objects with links to show such mappings, this problem is overcome by way of the present invention.

Independent claim 1 recites:

A method of mapping and displaying process objects at different levels of abstraction, comprising:

correlating business level objects to application level objects;

associating and storing source data with indications for both the business level objects and the application level objects; and

displaying the stored data associated with both the business level objects and the application level objects,

wherein the business level objects and the application level objects are respectively stored and displayed on a display as a plurality of nodes at different levels of abstraction, with correlations between the application level objects and the business level objects being accomplished by linking one or more nodes of the application level objects to one or more nodes of the business level objects at different levels of abstraction, and

wherein the source data is linked to one or more of the plurality of nodes,

wherein the step of displaying the stored data associated with both business level objects and the application level objects comprises automatically generating alerts or reports based on predetermined criteria, and wherein the step of displaying the stored data associated with both business level objects and the application level objects comprises:

displaying, on a first display screen, one or more of the business level objects as connected links; and

displaying, as connected links on a second display screen when one of the connected links on the first display screen is selected by a user, one or more of the application level objects that are correlated with the one or more of the business level objects.

Support for the “correlating” step may be found in Figures 1-3 and in paragraphs 0031 and 0033 of the specification.

Support for the “associating and storing” step may be found in Figures 5 and 8 and in paragraphs 0034 and 0040 of the specification.

Support for the “displaying the source data” step may be found in Figures 1-3 and in paragraphs 0035 and 0043 of the specification.

Support for the “wherein the business level objects and the application level objects are respectively stored and displayed on a display as a plurality of nodes at different levels of abstraction . . .” features may be found in Figures 1-3 and in paragraphs 0029 to 0031 of the specification.

Support for the “wherein the source data is linked to one or more of the plurality of nodes” features may be found in Figure 5 and in paragraphs 0038 and 0040 of the specification.

Support for the “wherein the step of displaying the stored data associated with both business level objects and the application level objects comprises automatically generating alerts or reports based on predetermined criteria” features may be found in paragraphs 0032 and 0033 of the specification.

Support for the “displaying, on a first display screen, one or more of the business level objects as connected links” features may be found in Figures 1-3 and in paragraphs 0029 to 0031 of the specification.

Support for the “displaying, as connected links on a second display screen when one of the connected links on the first display screen is selected by a user, one or more of the application level objects that are correlated with the one or more of the business level objects” may be found in Figures 1-3 and in paragraphs 0029 to 0031 and 0043 of the specification.

Independent claim 13 recites:

A storage device having program code recorded thereon for mapping and displaying process objects at different levels of abstraction, the program code configured to cause a computing system to perform the steps comprising:

correlating business level objects to application level objects;

associating and storing source data with indications for both the business level objects and the application level objects; and

displaying the stored data associated with both the business level objects and the application level objects,

wherein the business level objects and the application level objects are respectively stored and displayed on a display as a plurality of nodes at different levels of abstraction, with correlations between the application level objects and the business level objects being

accomplished by linking one or more nodes of the application level objects to one or more nodes of the business level objects at different levels of abstraction, and

wherein the source data is linked to one or more of the plurality of nodes,

wherein the step of displaying the stored data associated with both the business level objects and the application level objects comprises automatically generating alerts or reports based on predetermined criteria, and wherein the step of displaying the stored data associated with both business level objects and the application level objects comprises:

displaying, on a first display screen, one or more of the business level objects as connected links; and

displaying, as connected links on a second display screen when one of the connected links on the first display screen is selected by a user, one or more of the application level objects that are correlated with the one or more of the business level objects.

Support for the “correlating” step may be found in Figures 1-3 and in paragraphs 0031 and 0033 of the specification.

Support for the “associating and storing” step may be found in Figures 5 and 8 and in paragraphs 0034 and 0040 of the specification.

Support for the “displaying the source data” step may be found in Figures 1-3 and in paragraphs 0035 and 0043 of the specification.

Support for the “wherein the business level objects and the application level objects are respectively stored and displayed on a display as a plurality of nodes at different levels of abstraction . . .” features may be found in Figures 1-3 and in paragraphs 0029 to 0031 of the specification.

Support for the “wherein the source data is linked to one or more of the plurality of nodes” features may be found in Figure 5 and in paragraphs 0038 and 0040 of the specification.

Support for the “wherein the step of displaying the stored data associated with both business level objects and the application level objects comprises automatically generating alerts or reports based on predetermined criteria” features may be found in paragraphs 0032 and 0033 of the specification.

Support for the “displaying, on a first display screen, one or more of the business level objects as connected links” features may be found in Figures 1-3 and in paragraphs 0029 to 0031 of the specification.

Support for the “displaying, as connected links on a second display screen when one of the connected links on the first display screen is selected by a user, one or more of the application level objects that are correlated with the one or more of the business level objects” may be found in Figures 1-3 and in paragraphs 0029 to 0031 and 0043 of the specification.

7. Issues

The issues on appeal are: (1) whether the examiner erred in rejecting claims 13-22 and 24 under 35 U.S.C. § 101 as being directed to non-statutory subject matter; and (2) whether the examiner erred in rejecting claims 1-11, 13-22 and 24 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,151,438 to Hall et al..

8. Argument

I. It is respectfully submitted that the final rejection of claims 13-22 and 24 under 35 U.S.C. § 101 is erroneous for at least the following reasons.

In the final Office Action, claims 13-24 were rejected under 35 U.S.C. § 101, as directed to non-statutory subject matter, since the specification is “currently not believed to enable the computer readable medium to act as a computer hardware component and realized its functionality absent being claimed in combination with the necessary hardware component to receive and convert the hardwired, wireless, or a combination of hardwired or wireless to computer useable code.”

In the now-entered after-final response filed on July 10, 2007, Appellants amended claims 13-22 and 24 (and canceled claim 23) in the manner suggested on page 2 of the final Office Action, whereby claims 13-22 and 24 fully comply with 35 U.S.C. § 101.

II. It is respectfully submitted that the final rejection of claims 1-11, 13-22 and 24 under 35 U.S.C. § 102(e) is erroneous for at least the following reason.

i. Independent claims 1 and 13:

Independent claim 1 recites (with emphasis added):

displaying, on a first display screen, one or more of the business level objects as connected links; and

displaying, as connected links on a second display screen when one of the connected links on the first display screen is selected by a user, one or more of the application level objects that are correlated with the one or more of the business level objects.

See, for example, the description on page 9 of the specification and Figures 1-3 of the drawings.

The final Office Action asserts that Figures 5-16 and the text in the specification further expanding those figures teaches and suggests the above features of claim 1, but Appellants respectfully disagree. In more detail, Hall et al. is directed to a wireless device that provides real-time alerts in response to changes in business operational data. In Hall et al., an operating systems layer 20 that represents an enterprise's operational systems with which the solution operates, is provided as a bottom tier layer. An enterprise application integration (EAI) services layer 30 that provides the connectivity between back-end data systems of the operational systems layer 20 and an analytics engine 42 of a third tier is provided as a middle tier layer. Also, an analytics services layer 40 that corresponds to a multi-dimensional data mart is provided as a third tier layer. See columns 7 and 8 of Hall et al., for example.

Figure 5 of Hall et al. shows a display of a hand-held device 110, whereby icons are provided on that display for selection by a user. In more detail, an industry selection screen 110 is shown in Figure 5, which includes a number of icons including hyperlinks to informational screens relating to the selected industry. Figure 6 shows the display of the hand-held device 110 when the airline icon 112 of Figure 5 has been selected by a user. See column 15, lines 23-33 of Hall et al.

Figure 7 of Hall et al. shows the data statistics for critical business metrics related to selection of the flight operations icon of Figure 6 that was selected by a user, whereby those critical business metrics are displayed on the display. See column 15, lines 49-63 of Hall et al.

None of Figures 5-16 of Hall et al. shows its icons on a display being connected to other icons via links; rather, each icon is separate from the other icons displayed on the display of Hall et al. Thus, Hall et al. does not disclose or suggest the above-referenced features of claims 1 and 13, in which business level objects are linked to at least one other business level object by way of connections on a first display and in which application level objects are linked to at least one other application level object by way of connections on a second display.

The Advisory Action states that “at least one business level object [displayed] as a connected link” is shown in Figure 5 of Hall et al., whereby the Advisory Action asserts that “FIG. 5 shows a plurality of icons as connected links. When a user selects one icon, it will automatically link to another icon on the next screen.” In reply, Figure 5 of Hall et al. merely shows a plurality of icons, whereby when a user selects an icon (e.g., Airline icon), the display will change to a new display associated with the selected icon (e.g., the display of Figure 6 of Hall et al.). There is no disclosure or suggestion in Hall et al. with respect to displaying, on a first display screen, one or more business level objects as connected links. Rather, back-end software in the system of Hall et al. provides for a display of a new display (e.g., the display of Figure 6 of Hall et al.) when an icon on a main display (e.g., an icon in the display of Figure 5 of Hall et al.) is selected, whereby this is clearly much different from what is recited in independent claims 1 and 13.

Also, Hall et al. does not disclose or suggest displaying, as connected links on a second display screen, one or more application level objects that are correlated when the one or more business level objects, whereby the Advisory Action does not address these features.

As such, since no connected links (e.g., a display showing lines connecting icons) are shown or suggested in Hall et al., it cannot anticipate independent claims 1 and 13 (whereby

independent claim 13 recites similar features to those discussed above with respect to claim 1).

ii. Dependent claims 12 and 24:

Still further, with respect to claims 12 and 24 (which respectively depend from claims 1 and 13), those claims recite:

displaying, as connected links on a third display screen when one of the connected links on the second display screen is selected by a user, one or more of a lower level of application level objects that are correlated with the one or more of the application level objects displayed on the second display screen.

Hall et al. do not disclose or suggest such a third display screen of application level objects that provides a drill down from a second display screen of application level objects, nor does Hall et al. disclose or suggest displaying, as connected links on a third display screen, one or more lower level application level objects that are correlated with one or more application level objects. Note that there are no connected links associated with lower level application level objects in the “Airline” display shown in Figure 6 of Hall et al.

Accordingly, dependent claims 12 and 24 are not anticipated by Hall et al. for these additional reasons.

9. Conclusion

In view of above, Appellants respectfully solicit the Honorable Board of Patent Appeals and Interferences to reverse the rejections of the pending claims and pass this application on to allowance.

Respectfully submitted,

Date September 29, 2007

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10. EVIDENCE APPENDIX

None

11. RELATED PROCEEDINGS APPENDIX

None

12. CLAIMS APPENDIX

LIST OF THE CLAIMS ON APPEAL (WITH STATUS IDENTIFIERS)

1. (Previously Presented) A method of mapping and displaying process objects at different levels of abstraction, comprising:

correlating business level objects to application level objects;

associating and storing source data with indications for both the business level objects and the application level objects; and

displaying the stored data associated with both the business level objects and the application level objects,

wherein the business level objects and the application level objects are respectively stored and displayed on a display as a plurality of nodes at different levels of abstraction, with correlations between the application level objects and the business level objects being accomplished by linking one or more nodes of the application level objects to one or more nodes of the business level objects at different levels of abstraction, and

wherein the source data is linked to one or more of the plurality of nodes,

wherein the step of displaying the stored data associated with both business level objects and the application level objects comprises automatically generating alerts or reports based on predetermined criteria, and wherein the step of displaying the stored data associated with both business level objects and the application level objects comprises:

displaying, on a first display screen, one or more of the business level objects as connected links; and

displaying, as connected links on a second display screen when one of the connected links on the first display screen is selected by a user, one or more of the application level objects that are correlated with the one or more of the business level objects.

2. (Original) The method according to claim 1, wherein the step of correlating business level objects to application level objects comprises correlating objects at two or more levels of abstraction, wherein the business level objects corresponds to one level of abstraction and the application level objects corresponds to another level of abstraction.

3. (Original) The method according to claim 2, wherein the application level objects are further correlated to application component level objects at another level of abstraction.

4. (Original) The method according to claim 1, wherein the source data comprises application related data and operational data.

5. (Original) The method according to claim 4, wherein the application related data comprises data correlated to components of the application level objects.

6. (Original) The method according to claim 5, wherein the data correlated to the application level components comprises data collected by an application conversation tracking tool or a custom designed instrumentation for measuring related data.

7. (Original) The method according to claim 4, wherein the operational data comprises web session data or server related data.

8. (Original) The method according to claim 7, wherein the web session data comprises response times for web based interactions and the server related data comprises server load data.

9. (Original) The method according to claim 8, wherein the response times for web based interactions are correlated to application component level objects, application level objects, and business level objects.

10. (Original) The method according to claim 1, wherein the step of displaying the stored data associated with both the business level objects and the application level objects comprises filtering and/or aggregating the stored data responsive to a user's query.

11. (Canceled).

12. (Previously Presented) The method according to claim 1, wherein the predetermined criteria comprise one of a number of users accessing an object at any level of abstraction, a response time for web based interaction, or a termination of a user session at a particular point in a web based interaction, the method further comprising:

displaying, as connected links on a third display screen when one of the connected links on the second display screen is selected by a user, one or more of a lower level of application level objects that are correlated with the one or more of the application level objects displayed on the second display screen.

13. (Previously Presented) A storage device having program code recorded thereon for mapping and displaying process objects at different levels of abstraction, the program code configured to cause a computing system to perform the steps comprising:

correlating business level objects to application level objects;

associating and storing source data with indications for both the business level objects and the application level objects; and

displaying the stored data associated with both the business level objects and the application level objects,

wherein the business level objects and the application level objects are respectively stored and displayed on a display as a plurality of nodes at different levels of abstraction, with correlations between the application level objects and the business level objects being accomplished by linking one or more nodes of the application level objects to one or more nodes of the business level objects at different levels of abstraction, and

wherein the source data is linked to one or more of the plurality of nodes,

wherein the step of displaying the stored data associated with both the business level objects and the application level objects comprises automatically generating alerts or reports based on predetermined criteria, and wherein the step of displaying the stored data associated with both business level objects and the application level objects comprises:

displaying, on a first display screen, one or more of the business level objects as connected links; and

displaying, as connected links on a second display screen when one of the connected links on the first display screen is selected by a user, one or more of the application level objects that are correlated with the one or more of the business level objects.

14. (Previously Presented) The storage device according to claim 13, wherein the step of correlating business level objects to application level objects comprises correlating objects at two or more levels of abstraction, wherein the business level objects corresponds to one level of abstraction and the application level objects corresponds to another level of abstraction.

15. (Previously Presented) The storage device according to claim 14, wherein the application level objects are further correlated to application component level objects at another level of abstraction.

16. (Previously Presented) The storage device according to claim 13, wherein the source data comprises application related data and operational data.

17. (Previously Presented) The storage device according to claim 16, wherein the application related data comprises data correlated to components of the application level objects.

18. (Previously Presented) The storage device according to claim 17, wherein the data correlated to the application level components comprises data collected by an application conversation tracking tool or a custom designed instrumentation for measuring related data.

19. (Previously Presented) The storage device according to claim 16, wherein the operational data comprises web session data or server related data.

20. (Previously Presented) The storage device according to claim 19, wherein the web session data comprises response time for web based interactions and the server related data comprises server load data.

21. (Previously Presented) The storage device according to claim 20, wherein the response times for web based interactions are correlated to application component level objects, application level objects, and business level objects.

22. (Previously Presented) The storage device according to claim 13, wherein the step of displaying the stored data associated with both the business level objects and the application level objects comprises filtering and/or aggregating the stored data responsive to a user's query.

23. (Canceled).

24. (Previously Presented) The storage device according to claim 13, wherein the predetermined criteria comprise one of a number of users accessing an object at any level of abstraction, a response time for web based interaction, or a termination of a user session at a particular point in web based interaction, the method further comprising:

displaying, as connected links on a third display screen when one of the connected links on the second display screen is selected by a user, one or more of a lower level of application level objects that are correlated with the one or more of the application level objects displayed on the second display screen.

25. – 31. (Canceled).